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10 February 1961

MEMORANDUM FOR : Deputy Director (Plans)
THROUGH : Acting Chief, DPD SWB
SUBJECT : Project DYNASOAR

1. This memorandum is for information.
2. On 7 February 1961, Colonels Appold and Scoville of ARDC gave a briefing on the Air Force DYNASOAR project to Phil Strong and myself. This was instigated by a request from the DCI to Strong for information on this project and, according to Phil, the development of an Agency position.
3. The DYNASOAR project is intended to develop a vehicle which will ultimately have orbital performance and be inhabited by a crew who will be expected to perform some useful functions beyond merely pushing of buttons, as in Project MERCURY.
4. DYNASOAR is divided into three phases. Phase 1, priced at [redacted] includes the basic research and design and construction of the glider orbital vehicle launched by a Titan-1 missile. Inhabited flights are planned to begin in 1964 but this vehicle will have ballistic rather than completely orbital trajectories. Phase 2 is intended to reach orbital performance by 1966. The launching vehicle will be the Titan-2. This phase will cost an additional [redacted] Phase 3 is not well defined at the present time but is intended to produce an operational system which will have use in an attack and/or defensive and/or reconnaissance application. The glider vehicle is supposed to accommodate a 1,000-pound payload and to have 75 cubic feet available for payload installation. The approximate orbital characteristics, as now planned, would include perigee altitudes of 300,000 to 500,000 feet. There is no intention to have the glider maneuver while in orbit, but it is intended to be highly maneuverable in the sense of exact selection of landing area after de-orbiting. The Air Force is conducting an examination of the problems of reconnaissance under the orbital conditions selected.
5. The lowest perigees for DYNASOAR are approximately half the altitudes we have achieved with Project CORONA and the sensing function may be degraded under these more severe conditions.
6. Colonel Appold also mentioned the space plane concept as advanced by Aerospace Corporation. This is rather nebulous at the present time but is conceived as a vehicle in the 300,000 to 400,000 pound class at launch. During the ascent phase the vehicle would

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increase to the order of 1,000,000 pounds gross weight. After achieving orbit and burning of stored propellants and acquired oxidizer, the space plane weight would be in the order of 100,000 to 150,000 pounds.

7. Phil Strong is preparing a summary of these technical data and a position vis-a-vis the project. My suggestion on this latter is that we continue our familiarity with the project objectives and achievements. However, insofar as current satellite reconnaissance projects and the existence of Project Mercury and the X-15 are concerned, it would appear that some consolidation of these various efforts would be in order in the over-all governmental sense.

EUGENE P. KIEFER
Chief, Technical Analysis Staff, DPD

cc: OSI-Gen. Strong #3

DDP/DPD/TAS:EPK:hh

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